



16147

TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

INSTRUMENT APPROACH PROCEDURE CHARTS



IFR TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude, and/or airports that have civil IFR takeoff minimums other than standard, are listed below. Takeoff Minimums and Departure Procedures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are referred to as Obstacle Departure Procedures (ODPs) and are textually described below, or published separately as a graphic procedure. If the ODP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or the applicable military volume, as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not specifically assigned an ODP, SID, or radar vector as part of an IFR clearance, an ODP may be required to be flown for obstacle clearance, even though not specifically stated in the IFR clearance. When doing so in this manner, ATC should be informed when the ODP being used contains a specified route to be flown, restrictions before turning, and/or altitude restrictions.

Some ODPs, which are established solely for obstacle avoidance, require a climb in visual conditions to cross the airport, a fix, or a NAVAID in a specified direction, at or above a specified altitude. These procedures are called Visual Climb Over Airport (VCOA). To ensure safe and efficient operations, the pilot must verbally request approval from ATC to fly the VCOA when requesting their IFR clearance.

At some locations where an ODP has been established, a diverse vector area (DVA) may be created to allow radar vectors to be used in lieu of an ODP. DVA information will state that headings will be as assigned by ATC and climb gradients, when applicable, will be published immediately following the specified departure procedure.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: Title 14 Code of Federal Regulations Part 91 prescribes standard takeoff rules and establishes takeoff minimums for certain operators as follows: (1) Aircraft having two engines or less - one statute mile. (2) Aircraft having more than two engines - one-half statute mile. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) takeoff minima are published below. For military takeoff minima, refer to appropriate service directives.

NAME	TAKEOFF MINIMUMS
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NAME	TAKEOFF MINIMUMS
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BABELTHUAP, KOROR, PS

BABELTHUAP/KOROR (ROR) (PTRO)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 1 09015 (FAA)

TAKEOFF MINIMUMS: **Rwy 27**, 400-1 or std. with a
min. climb of 296' per NM to 500.

DEPARTURE PROCEDURE: **Rwy 9**, climb runway
heading to 700 then as cleared.

GUAM, GQ

GUAM INTL (GUM) (PGUM)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 1 15176 (FAA)

TAKEOFF MINIMUMS: **Rwy 6L**, 400- 1½ or std. w/
min. climb of 380' per NM to 800. **Rwy 6R**, 400- 1½
or std. w/min. climb of 520' per NM to 900. **Rwy 24L**,
std. w/min. climb of 280' per NM to 1700. **Rwy 24R**,
std. w/min. climb of 285' per NM to 1700.

DEPARTURE PROCEDURE: **Rwy 6L**, 6R, climb
heading 063° to 1100 before turning right.

NOTE: **Rwy 6L**, trees beginning 2280' from DER, 690'
left of centerline, up to 40' AGL/427' MSL. Trees
beginning 562' from DER, 115' right of centerline, up
to 40' AGL/443' MSL. Tree 5729' from DER, 1887'
right of centerline, 40' AGL/546' MSL. **Rwy 6R**, trees
beginning 1224' from DER, 38' left of centerline, up to
40' AGL/389' MSL. Trees beginning 4054' from DER,
331' left of centerline, up to 40' AGL/442' MSL. Pole
3707' from DER, 933' right of centerline, 10'
AGL/456' MSL. Tree 4227' from DER, 265' right of
centerline, 40' AGL/443' MSL. Ol bldg 6150' from
DER, 1953' right of centerline, 40' AGL/701' MSL.
Tree 6729' from DER, 1186' right of centerline, 40'
AGL/546' MSL. Tree 7934' from DER, 1781' right of
centerline, 40' AGL/659' MSL.

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TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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HANA, HI

HANA (HNM) (PHHN)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 05244 (FAA)

DEPARTURE PROCEDURE: Use LINDBERG DEPARTURE.

HILO, HI

HILO INTL (ITO) (PHTO)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 6 05356 (FAA)

DEPARTURE PROCEDURE: Use PARIS DEPARTURE.

DIVERSE VECTOR AREA (RADAR VECTORS)

AMDT 1 16147 (FAA)

Rwys 3, 8, heading as assigned by ATC. **Rwy 21**, heading as assigned by ATC; requires minimum climb of 300' per NM to 1300. **Rwy 26**, heading as assigned by ATC; requires minimum climb of 420' per NM to 2800.

HONOLULU, HI

HONOLULU INTL (HNL) (PHNL)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 7 85269 (FAA)

DEPARTURE PROCEDURE: use HONOLULU DEPARTURE.

DIVERSE VECTOR AREA (RADAR VECTORS)

AMDT 1 16035 (FAA)

Rwy 4L/R, heading as assigned by ATC; requires minimum climb of 490' per NM to 2100, do not exceed 180 KTS until established on assigned heading. **Rwy 8L**, heading as assigned by ATC; requires minimum climb of 360' per NM to 1700. **Rwy 8R**, heading as assigned by ATC; requires minimum climb of 240' per NM to 700. **Rwy 22L/R**, heading as assigned by ATC; requires minimum climb of 320' per NM to 3700. **Rwy 26L**, heading as assigned by ATC; requires minimum climb of 360' per NM to 3700. **Rwy 26R**, heading as assigned by ATC; requires minimum climb of 430' per NM to 4400.

KAHULUI, HI

KAHULUI (OGG) (PHOG)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 7 14149 (FAA)

TAKEOFF MINIMUMS: **Rwy 23**, NA-ATC.DEPARTURE PROCEDURE: **Rwy 2**, climb on a heading 316° CW 052° from DER to 10600 before proceeding on course.

Rwy 5, climb on a heading 312° CW 040° from DER to 10700 before proceeding on course. **Rwy 20**, climb on heading 185° from DER to 11000 before proceeding on course.

NOTE: **Rwy 2**, bush and trees beginning 190' from DER, 363' left of centerline, up to 60' AGL/79' MSL. Bushes and obstruction light on building beginning 339' from DER, 289' right of centerline, up to 20' AGL/25' MSL. **Rwy 5**, tree 2359' from DER, 512' left of centerline, 56' AGL/75' MSL. Fence 20' from DER, 304' right of centerline, 11' AGL/31' MSL. Bushes, trees and fence beginning 228' from DER, 300' right of centerline, up to 76' AGL/95' MSL.

DIVERSE VECTOR AREA (RADAR VECTORS)

AMDT 1 16147 (FAA)

Rwys 2, 5, 20, heading as assigned by ATC.

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KAILUA-KONA, HI

KONA INTL AT KEAHOE (KOA) (PHKO)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 5 11237 (FAA)

DEPARTURE PROCEDURE: **Rwy 17**, climb on heading 174° to 500 then climbing right turn heading 357° and KOA R-327 to MYNAH INT for assigned route. **Rwy 35**, eastbound climb on heading 354° to intercept MUE R-246 for assigned route; northwest bound climb heading 354° to 500 then climbing left turn to assigned route.

NOTE: **Rwy 17**, obstruction light on AMOM at DER, 350' right of centerline, 25' AGL/62' MSL. **Rwy 35**, tree 1606' from DER, 7211' right of centerline, 15' AGL/94' MSL.

DIVERSE VECTOR AREA (RADAR VECTORS)

AMDT 1 15288 (FAA)

Rwys 17, 35, heading as assigned by ATC.

KALAUPAPA, HI

KALAUPAPA (LUP) (PHLU)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 11069 (FAA)

DEPARTURE PROCEDURE: Use KALAUPAPA ONE DEPARTURE.

KAMUELA, HI

WAIMEA-KOHALA (MUE) (PHMU)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 1 05076 (FAA)

TAKEOFF MINIMUMS: **Rwy 4**, 400-2 or std. with a min. climb of 240' per NM to 3100.

DEPARTURE PROCEDURE: **Rwy 4**, climb via heading 041° to 3100 then climbing right turn via heading 080° and MUE VOR/DME R-057 to 6000 to VELLA INT, then as assigned. **Rwy 22**, climb via heading 233° and MUE VOR/DME R-234 to 5000 to JASON INT, then as assigned.

NOTE: **Rwy 4**, windssock 158' from DER, 299' right of centerline, 25' AGL/2702' MSL. Fence 2754' from DER, 323' right of centerline, 12' AGL/2741' MSL. Tree 5200' from DER, 179' right of centerline, 50' AGL/2817' MSL. Tree 5331' from DER, 110' left of centerline, 50' AGL/2829' MSL. Tree 1.3 NM from DER, 739' right of centerline, 50' AGL/2864' MSL. Tree 1.3 NM from DER, 1741' left of centerline, 50' AGL/2889' MSL. Antenna 1.8 NM from DER, 1094' left of centerline 152' AGL/2992' MSL. Rising terrain beginning 1.5 NM from DER, 3.9 NM left of centerline, up to 13796' MSL. **Rwy 22**, cactus at DER, 191' left of centerline, 10' AGL/2668' MSL. Tree at DER, 353' right of centerline, 50' AGL/2687' MSL. Bush 687' from DER, 186' left of centerline, 30' AGL/2673' MSL. Pole 1058' from DER, 124' left of centerline, 20' AGL/2683' MSL. Rapidly rising terrain beginning 1.5 NM from DER, 4209' left of centerline, up to 5513' MSL.

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KAPOLEI, OAHU ISLAND, HI

KALAELOA (JOHN RODGERS FIELD) (JRF)
(PHJR)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

ORIG 09295 (FAA)

DEPARTURE PROCEDURE: DME Required. **Rwys 4L, 4R, 11**, climb heading 200° to intercept HNL VORTAC R-241 to GECKO/HNL 22.4 DME before proceeding on course. **Rwys 22L, 22R**, climb heading 224° to intercept HNL VORTAC R-241 to GECKO/HNL 22.4 DME before proceeding on course. **Rwy 29**, climb heading 210° to intercept HNL VORTAC R-241 to GECKO/HNL 22.4 DME before proceeding on course.

NOTE: **Rwy 11**, tree 1533' from DER, 831' left of centerline, 60' AGL/70' MSL. **Rwy 22L**, vehicles on road 305' from DER, 195' left of centerline, 15' AGL/26' MSL. **Rwy 29**, tree 1794' from DER, 573' left of centerline, 60' AGL/99' MSL.

KAUNAKAKAI, HI

MOLOKAI (MKK) (PHMK)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

AMDT 6 14149 (FAA)

DEPARTURE PROCEDURE: use KAUNAKAKAI
DEPARTURE.

DIVERSE VECTOR AREA (RADAR VECTORS)

AMDT 1 15288 (FAA)

Rwy 17, heading as assigned by ATC. **Rwy 23**, heading as assigned by ATC; requires minimum climb of 460' per NM to 2000.

KOSRAE, FM

KOSRAE (TTK) (PTSA)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

ORIG-A 09071 (FAA)

CAUTION: Ships with masts to 200' traverse harbor entrance located on west side of runway.

DEPARTURE PROCEDURE: **Rwy 5**, left turn. **Rwy 23**, right turn, climb to 2000 or above before turning east.

LANAI CITY, HI

LANAI (LNY) (PHNY)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

AMDT 5 09239 (FAA)

TAKEOFF MINIMUMS: **Rwy 3**, 400-1 or std. w/ min. climb of 370' per NM to 2700 or 2500-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 3**, climb heading 033° to 1720 before turning left. Climb heading 300° or 180° to intercept route or airway, then continue as cleared. Maintain maximum 210 kts until turn is completed or for climb in visual conditions cross LNY VORTAC eastbound at or above 3700. **Rwy 21**, climb heading 213° to assigned altitude. Eastbound - climb westbound to cross LNY VORTAC eastbound at or above 2700 and climb as cleared. Westbound - climb direct LNY VORTAC then via assigned route.

NOTE: **Rwy 3**, multiple poles, trees, and terrain beginning 2108' from DER, 1011' left of centerline, up to 200' AGL/2202' MSL. **Rwy 21**, lighted windsock 8' from DER, 191' right of centerline, 30' AGL/1323' MSL.

LIHUE, HI

LIHUE (LIH) (PHLI)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES

AMDT 8 00279 (FAA)

TAKEOFF MINIMUMS: **Rwy 21**, 2400-3. Use DIANE DEPARTURE PROCEDURE.

DEPARTURE PROCEDURE: **Rwys 3, 35**, to V15, climb runway heading to 500 then climbing right turn, heading 125°, then as assigned. **Rwy 17**, to V15, climb runway heading to 500 then climbing left turn, heading 045°, then as assigned. To LIH-150 climb runway heading to 500 then climbing left turn, heading 120°, then as assigned. **Rwy 21**, to V15, climb runway heading to 550 then climbing left turn, heading 090°, to intercept LIH R-110, maintain 5000, direct BOOKE INT or as assigned. To LIH-148, climb runway heading to 550, then climbing left turn, heading 120°, to intercept LIH R-148, maintain 3000, direct NAPUA INT or as assigned.

DIVERSE VECTOR AREA (RADAR VECTORS)

AMDT 1 15288 (FAA)

Rwys 3, 17, heading as assigned by ATC. **Rwy 21**, heading as assigned by ATC; requires minimum climb of 400' per NM to 4500. **Rwy 35**, heading as assigned by ATC; requires minimum climb of 230' per NM to 700.

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MAJURO ATOLL, RM

MARSHALL ISLANDS INTL (MAJ) (PKMJ)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG 10098 (FAA)

NOTE: **Rwy 7**, antenna on building 215' from DER, 446' left of centerline, 48' AGL/54' MSL. Obstruction light on AMOM 44' from DER, 269' left of centerline, 33' AGL/39' MSL. Obstruction light on WSK 10' from DER, 245' right of centerline, 23' AGL/29' MSL. Tree 934' from DER, 243' left of centerline, 39' AGL/45' MSL. Bush 555' from DER, 187' right of centerline, 17' AGL/23' MSL. **Rwy 25**, obstruction light on WSK 11' from DER, 246' left of centerline, 23' AGL/29' MSL. Post 51' from DER, 252' right of centerline, 8' AGL/14' MSL. Tree 996' from DER, 39' left of centerline, 31' AGL/37' MSL. Tree 563' from DER, 5' right of centerline, 20' AGL/26' MSL. Bushes beginning 207' from DER, from 124' left to 207' right of centerline, up to 14' AGL/20' MSL. Vehicle on roadway 130' from DER, 241' right of centerline, 15' AGL/20' MSL.

PAGO PAGO, AQ

PAGO PAGO INTL (PPG) (NSTU)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG-A 09071 (FAA)

TAKEOFF MINIMUMS: **Rwy 23**, std. w/ min. climb of 320' per NM to 800, or 2700-3 for climb in visual conditions.

Rwy 26, NA-obstacles.

DEPARTURE PROCEDURE: **Rwys 5, 8**, climbing right turn southbound between TUT R-090 clockwise to R-180 to 2800, then proceed on course. **Rwy 23**, climbing left turn heading 150° southbound between TUT R-090 clockwise to R-180 to 2800, then proceed on course. For climb in visual conditions: cross Pago Pago Intl Airport at or above 2600 before proceeding on course.

NOTE: **Rwy 5**, bush 1' from DER, 237' right of centerline, 3' AGL/12' MSL. Bush 379' from DER, 362' left of centerline, 14' AGL/23' MSL. Ship 998' from DER, 57' right of centerline, 150' AGL/150' MSL. **Rwy 8**, bush 689' from DER, 360' left of centerline, 15' AGL/23' MSL. Ship 1435' from DER, 304' left of centerline, 150' AGL/150' MSL.

Rwy 23, multiple trees beginning 352' from DER, 173' left of centerline, up to 20' AGL/132' MSL. Multiple trees beginning 881' from DER, 296' right of centerline, up to 20' AGL/172' MSL. Multiple trees and poles beginning 1.6 NM from DER, 38' right of centerline, up to 367' AGL/554' MSL. Tree 2.3 NM from DER, 2126' left of centerline, 20' AGL/387' MSL.

POHNPEI ISLAND, FM

POHNPEI INTL (PNI) (PTPN)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2 80079 (FAA)

TAKEOFF MINIMUMS: **Rwys 9, 27**, 400-1½.

DEPARTURE PROCEDURE: **Rwy 9**, climb runway heading to 500 then left turn for north or west departure. **Rwy 27**, climb runway heading to 500 then right turn for north or east departure. Climb runway heading to 1500 before turning for south departure.

CAUTION: Ships with superstructure to 150', traverse Ponape channel, 400' off approach end of Rwy 9, closing airport at times.

ROTA ISLAND, CQ

BENJAMIN TAISACAN MANGLONA INTL
(GRO) (PGRO)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2 14037 (FAA)

DEPARTURE PROCEDURE: **Rwy 9**, climb heading 090° to 1400 before turning. **Rwy 27**, climb heading 270° to 2200 before turning southbound.

NOTE: **Rwy 9**, tree 514' from DER, 418' left of centerline, up to 30' AGL/638' MSL. **Rwy 27**, tree 1203' from DER, 581' left of centerline, up to 30' AGL/618' MSL.

SAIPAN, CQ

FRANCISCO C ADA/SAIPAN INTL (GSN)
(PGSN)

TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
ORIG-A 09071 (FAA)

DEPARTURE PROCEDURE: **Rwys 7, 25**, climb on runway heading to 1600 before climbing on course.

TINIAN ISLAND, CQ

TINIAN INTL (TNI) (PGWT)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 1 09239 (FAA)

NOTE: **Rwy 8**, trees beginning 694' from DER, 507' left of centerline, up to 100' AGL/363' MSL. Multiple trees beginning 569' from DER, 471' right of centerline, up to 100' AGL/389' MSL. **Rwy 26**, multiple trees beginning 743' from DER, 508' right of centerline, up to 100' AGL/363' MSL.

WENO ISLAND, FM

CHUUK INTL (TKK) (PTKK)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2 10042 (FAA)

DEPARTURE PROCEDURE: **Rwy 4**, climb heading 041° to 1100 before proceeding on course. **Rwy 22**, climb heading 221° to 1500 before proceeding on course.

NOTE: **Rwy 4**, bush 205' from DER, 203' right of centerline, 7' AGL/17' MSL. **Rwy 22**, bush 5' from DER, 241' right of centerline, 14' AGL/24' MSL. Bush 221' from DER, 85' right of centerline, 7' AGL/17' MSL. **CAUTION:** Ships with superstructure to 150' traverse channels west of runway 4/22.

YAP ISLAND, FM

YAP INTL (T11) (PTYA)
TAKEOFF MINIMUMS AND (OBSTACLE)
DEPARTURE PROCEDURES
AMDT 2 94342 (FAA)

DEPARTURE PROCEDURE: **Rwy 7**, climbing right turn to 1500 via 090° bearing from YP NDB/DME, then climb on course. **Rwy 25**, climb to 500, then climb on course.

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